Novel Light-weight Warhead for Breaching and Destroying Hardened Structures

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Small Business Information
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Abstract
ENIG proposes an innovative and novel approach, using pulsed power to convert explosive chemical energy into lethal jets to attack MOUT targets when fired from light weapons. The device is in the form of a precursor warhead optimized to maximize cavity diameter in brick and concrete targets so that an effective follow-through munition can be delivered within combatant structures. The warhead is compatible with weight/size constraints of light weapons having diameters of 66-84 mm. The precursor device is completely autonomous carrying small on-board power for seeding the pulsed power system. Electrical energy generated powers liners of metal and reactive materials into jet penetrators that represent more effective precursors to facilitate main munition lethality. In prior ENIG efforts, devices were designed and laboratory tests have demonstrated jet formation and penetration technology. Phase I efforts have resulted in moving technology forward and identifying configurations that can utilize this technology into viable warhead systems. ENIG has teamed with technology partners for present development, including Lockheed Martin Missile Fire Control (LMMFC) for transition into various weapon platforms. Phase I benefited from support and technical exchange between AMRDEC, DARPA and AFRL/RDHP. Both DARPA and AFRL have provided continuing Letters of Support for Phase II.

* information listed above is at the time of submission.